

REMARKS

Claims 1 and 12 have been amended. Claims 1-21 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Specification:

In section 3 of the Office Action, the Examiner requested the status of related applications. Accordingly, the UK patent (GB 2369692, filed November 29, 2000) corresponding to this US application was granted October 16, 2002.

Section 102(a),(b) Rejection:

Section 4 of the Office Action rejected claims 1-21 under 35 U.S.C. § 102(a) as being anticipated by Rowlinson et al., WO 99/66402 (hereinafter “Rowlinson”) or 35 U.S.C. § 102(b) as being anticipated by Garnett, U.S. Patent Number 5,991,900, (hereinafter “Garnett”). The Applicants respectfully traverse.

Amended claim 1 recites, in pertinent part, “the bridge includes a direct memory access controller that is operable to respond to a fault state by controlling the copying of the dirtied blocks of the main memory of the first processing set indicated in the dirty memory of the first processing set to the main memory of another processing set”.

Rowlinson, page 22, lines 31-34, recites “The automatic recovery process includes reintegration of the state of the processing sets to a common status in order to attempt a restart in lockstep. To achieve this, the processing set which asserts itself as the primary processing set as described above copies its complete state to the other processing set. This involves ensuring that the content of the memory of both processors is the same before trying a restart in lockstep mode.

Accordingly Rowlinson teaches one processing set controlling the copying its entire memory contents to the memory of another processing set as opposed to a DMA controller included in a bridge determining which blocks of the main memory of a first processing set are dirty and copying only those dirty blocks to the main memory of another processing set, as presented in claim 1. Therefore, the Applicants believe that the invention of claim 1 patentably distinguishes over Rowlinson.

Garnett, column 23, lines 4-6, teaches “In stage S42, the primary processor (e.g. processing set 14) copies the whole of its memory 56 to the memory 56 of the other processing set (e.g. processing set 16)”. Accordingly Garnett also teaches one processing set copying its entire memory contents to the memory of another processing set as opposed to a DMA controller included in a bridge determining which blocks of the main memory of a first processing set are dirty and copying only those dirty blocks to the main memory of another processing set, as presented in claim 1. Therefore, the Applicants believe that the invention of claim 1 patentably distinguishes over Garnett and Rowlinson, taken either individually or in combination.

Claim 12 recites features, which are similar to those recited in claim 1, specifically “a direct memory access controller in the bridge responding to a fault state by controlling the copying of blocks of the main memory of the first processing set indicated in the dirty memory of the first processing set to the main memory of another processing set”. Claim 12 is therefore, likewise believed to patentably distinguish over Garnett and Rowlinson. The applicants assert that the dependent claims (2-11 depending from claim 1, and 13-21 depending from claim 12 are patentable over Garnett and Rowlinson for at least the reasons given with regard to claim 1.

Further with regard to claim 9, the Office Action states “Garnet [sic] further discloses wherein the direct memory access controller is operable to instigate a search of the dirty memory for dirty indicators indicative of dirtied blocks (col. 22 line18 thru col. 23 line 29)”. The applicants find no evidence to support this statement in the cited location. To the contrary, at column 23, lines 1 and 2, Garnett teaches “In stage S41, the

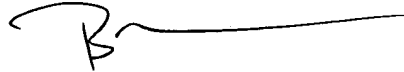
primary processing set reads the dirty RAM 124". For at least this additional reason, claim 9 is believed to patentably distinguish over Garnett. Claim 20 recites features, which are similar to those recited in claim 9, and is therefore believed to patentably distinguish over Garnett for at least this additional reason.

CONCLUSION

Applicants submit the application is in condition for allowance, and an early notice to that effect is requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5681/0270.

Respectfully submitted,



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